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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/560,839	06/08/2006	Elmar Thurner	2003P06167WOUS	6878

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SIEMENS CORPORATION  
INTELLECTUAL PROPERTY DEPARTMENT  
170 WOOD AVENUE SOUTH  
ISELIN, NJ 08830

EXAMINER
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GAMI, TEJAL

ART UNIT	PAPER NUMBER
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2121

MAIL DATE	DELIVERY MODE
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07/02/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No. 10/560,839	Applicant(s) THURNER, ELMAR	
	Examiner Tejal J. Gami	Art Unit 2121	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 08 June 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 25-47 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 25-47 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 December 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>15 December 2005</u> .  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Specification*

1. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 25-47 are rejected under 35 U.S.C. 102(e) as being anticipated by Lo et al. (U.S. Publication Number 2003/0061349).

**As to independent claim 25**, Lo discloses a method for programming and/or executing programs for industrial automation systems (see Paragraph [0001]), comprising:

providing a computer unit with input aids (see Paragraph [0046]), output aids and a display device (see Paragraph [0046]), having modules and functions respectively representing sub-tasks (e.g., employ graphical programming schemes) of an automation solution being modeled and/or created using the input aids and optionally the display device (see Paragraph [0047]), having the modules and functions (e.g., Function Block Diagrams FBD) (see Paragraph [0053]) being structured and networked using the input aids and optionally the display device as to form a hierarchical tree as a machine-independent program (see Paragraph [0048] where XML documents have the structure of hierarchical trees), wherein the machine-independent program is loaded in the form of a hierarchical tree into the corresponding components of the automation system and the corresponding components of the automation system execute the or each machine-independent program present in the form of at least one hierarchical tree (see Paragraph [0048] where XML documents have the structure of hierarchical trees).

**As to independent claim 38,** Lo discloses a device for programming and/or executing programs for industrial automation systems (see Paragraph [0001]), comprising:

at least one computer unit with input aids, output aids and a display device (see Paragraph [0046]);

a component for modeling and/or creating modules and functions (e.g., Function Block Diagrams FBD), which respectively represent the sub-tasks (e.g., employ graphical programming schemes) of an automation solution (see Paragraph [0047] and [0075]);

a component for structuring the modules and functions and for networking the same, to form at least one hierarchical tree as at least one machine-independent program (see Paragraph [0048] where XML documents have the structure of hierarchical trees); and

a component to load the or each machine-independent program in the form of at least one hierarchical tree into the corresponding components of the automation system with the corresponding components of the automation system executing the machine-independent program present in the form of at least one hierarchical tree (see Paragraph [0048] where XML documents have the structure of hierarchical trees).

**As to independent claim 47**, Lo discloses a Computer program implementing a method (see Abstract), comprising:

providing a computer unit with input aids, output aids and a display device (see Paragraph [0046]), having modules and functions (e.g., Function Block Diagrams FBD) respectively representing sub-tasks (e.g., employ graphical programming schemes) of an automation solution being modeled and/or created using the input aids and optionally the display device (see Paragraph [0047] and [0075]), having the modules and functions (e.g., Function Block Diagrams FBD) (see Paragraph [0053]) being structured and networked using the input aids and optionally the display device as to form a hierarchical tree as a machine-independent program (see Paragraph [0048] where XML documents have the structure of hierarchical trees), wherein the machine-independent program is loaded in the form of a hierarchical tree into the corresponding components of the automation system and the corresponding components of the automation system

execute the or each machine-independent program present in the form of at least one hierarchical tree (see Paragraph [0048] where XML documents have the structure of hierarchical trees).

**As to dependent claim 26**, Lo teaches the method according to claim 25, wherein the machine-independent program is executed on corresponding components of the automation system with the aid of at least one object machine assigned to the same (e.g., server 50 and client devices 30 exchange XML documents using protocols) (see Paragraph [0052]).

**As to dependent claim 27**, Lo teaches the method according to claim 25, wherein the machine-independent program is present in the form of at least one hierarchical object or operator tree in the corresponding components of the automation system and is processed interpretatively (see Paragraph [0048] where XML documents have the structure of hierarchical trees).

**As to dependent claim 28**, Lo teaches the method according to claim 25, wherein the machine-independent program is present in the form of at least one object or operator tree with a structure equivalent or similar to the representation of the program in the or each display device (see Paragraph [0048] where XML documents have the structure of hierarchical trees).

**As to dependent claim 29**, Lo teaches the method according to claim 25, wherein the machine-independent program is loaded into the corresponding components of the automation system using a machine-independent, symbolic

representation of the hierarchical tree (e.g., symbolic designation) (see Paragraph [0053]).

**As to dependent claim 30**, Lo teaches the method according to claim 29, wherein the machine-independent and symbolic representation of the hierarchical tree is in the form of a byte code or a markup language such as extended markup language (e.g., XML) (see Paragraph [0048]).

**As to dependent claim 31**, Lo teaches the method according to claim 25, wherein the object machine is configured as a real-time object machine with deterministic response and cycle times (e.g., cycle time) (see Paragraph [0007]).

**As to dependent claim 32**, Lo teaches the method according to claim 25, wherein the object machine provides operators and objects from which the machine-independent program is provided in the form of the hierarchical tree (see Paragraph [0048] where XML documents have the structure of hierarchical trees).

**As to dependent claim 33**, Lo teaches the method according to claim 32, wherein the operators are instantiated during or after the loading of the machine-independent program and the symbolic representation of the hierarchical tree is converted to physical addresses to generate a loadable program (e.g., symbolic designation) (see Paragraph [0053]).

**As to dependent claim 34**, Lo teaches the method according to claim 25, wherein the object machine is implemented as a function unit that is closed and that processes the hierarchical tree to the runtime (see Paragraphs [0047]-[0048] where XML documents have the structure of hierarchical trees).

**As to dependent claim 35**, Lo teaches the method according to claim 25, wherein the object machine is implemented in a distributed manner as at least one object, with the hierarchical object or operator tree processing itself (see Paragraph [0048] where XML documents have the structure of hierarchical trees).

**As to dependent claim 36**, Lo teaches the method according to claim 25, wherein the modules and functions (e.g., Function Block Diagrams FBD) are assigned model information and/or meta-information using the input aids and/or the display device (see Paragraphs [0046]-[0047]).

**As to dependent claim 37**, Lo teaches the method according to claim 25, wherein the objects of the machine-independent program present as a hierarchical object or operator tree are assigned a collection of infrastructure services or infrastructure functions that access the objects or metadata assigned to the objects in a generic manner so that an infrastructure service or an infrastructure function can be used by all the objects and is applicable to all objects with metadata (e.g., tag) (see Paragraph [0053] and [0070]).

**As to dependent claim 39**, Lo teaches the device according to claim 38, wherein at least one object machine is assigned to the corresponding components of the automation system to execute the machine-independent program (e.g., server 50 and client devices 30 exchange XML documents using protocols) (see Paragraph [0052]).

**As to dependent claim 40**, Lo teaches the device according to claim 38, wherein the machine-independent program is present in the form of at least one object



or operator tree with a structure equivalent or similar to the representation of the program in the display device (see Paragraph [0048] where XML documents have the structure of hierarchical trees).

**As to dependent claim 41**, Lo teaches the device according to claim 39, wherein the object machine is configured as a real-time object machine with deterministic response and cycle times (e.g., cycle time) (see Paragraph [0007]).

**As to dependent claim 42**, Lo teaches the device according to claim 38, wherein the object machine provides operators, and objects, from which the or each machine-independent program is provided in the form of the or each hierarchical tree (see Paragraph [0048] where XML documents have the structure of hierarchical trees).

**As to dependent claim 43**, Lo teaches the device according to claim 38, further comprising a device for assigning model information and/or meta-information to the modules and functions (e.g., tag) (see Paragraph [0053] and [0070]).

**As to dependent claim 44**, Lo teaches the device according to claim 38, wherein the object machine is implemented as a function unit that is closed and processes the or each hierarchical tree to the runtime (see Paragraphs [0047]-[0048] where XML documents have the structure of hierarchical trees).

**As to dependent claim 45**, Lo teaches the device according to claim 38, wherein the object machine is implemented in a distributed manner as at least one object, with the hierarchical object or operator tree processing itself (see Paragraph [0048] where XML documents have the structure of hierarchical trees).

**As to dependent claim 46**, Lo teaches the device according to claim 38, wherein the objects of the machine-independent program present as a hierarchical object or operator tree are assigned a collection of infrastructure services or infrastructure functions that access the objects via the containers assigned to the objects so that an infrastructure service or infrastructure function can be used by all the objects (see Paragraph [0053] for tools support all programming languages; and Paragraph [0070] for robust communication and data transfer from a shop floor to a board room).

### ***Conclusion***

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Izumi (U.S. Publication Number 2002/0010696) teaches automatic aggregation method, automatic aggregation apparatus, and recording medium having automatic aggregation program.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tejal J. Gami whose telephone number is (571) 270-1035. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony Knight can be reached on (571) 272-3687. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2121

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



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